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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,432	03/05/2001	Christophe Chevance	PF980059	1692

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EXAMINER

RAO, ANAND SHASHIKANT

ART UNIT PAPER NUMBER

2613

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,432

Applicant(s)

CHEVANCE ET AL.

Examiner

Andy S. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/5/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 10-11 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 9, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/5/05 has been entered.

Response to Amendment

2. Applicant's arguments with respect to claims 1-4, 7, and 10-11 as filed in the Amendment of 8/5/05 have been considered but are moot in view of the new ground(s) of rejection based on newly cited portions of the previously applied Kerdranvrat reference addressing the newly added limitations.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerdranvrat in view of Lee.

Kerdranvrat discloses method of movement estimation for a sequence of images including segmentation of a current video image into image blocks, movement estimation per image block between the current image and a previous image (Kerdranvrat: column 3, lines 35-40) in order to obtain a movement vector field for said current image (Kerdranvrat: column 2, lines 36-39), a stage of reassignment of a vector to a block by selecting one movement vector from among N predominant vectors (Kerdranvrat: column 2, lines 44-48), wherein the predominant vectors are the ones of the group of vectors belonging to the movement vector field for said current image and at least to the movement vector field for a preceding image (Kerdranvrat: column 2, lines 9-19) corresponding to a movement vector between said preceding image and a further preceding image (Kerdranvrat: column 7, lines 40-50: "...using vectors selected by the preceding phases..." which are multiple preceding images), the vectors being scaled according to the temporal distance to which they correspond (Kerdranvrat: column 2 lines 53-60: wherein he shows he scales the number of vectors depending on the necessary or available flow rate). However, Kerdranvrat fails disclose scaling the vectors according to the temporal distance as in the claims. Lee discloses a motion estimation method which discloses that temporal scaling according to a temporal distance was well known at the time the invention is widely used to reduce the processing load on an image encoding scheme (Lee: abstract, lines all). Therefore it would have been obvious to one of ordinary skill in the art to incorporate Lee's temporal scaling based on a temporal distance to the Kerdranvrat dominant vectors in order to reduce the processing load would be desirable of the Kerdranvrat method. The Kerdranvrat method, now incorporating Lee's temporal scaling based on a temporal distance, has all of the features of claim 1.

Regarding claim 2, the Kerdranvrat method, now incorporating Lee's temporal scaling based on a temporal distance, that for a predominant vector, second-order regional maxima are detected so as not to be taken into account during the selection of the other predominant vectors. (Kerdranvrat: column 6, lines 16-29: note the maxima must be detected before it can be eliminated), as in the claim.

Regarding claim 3, the Kerdranvrat method, now incorporating Lee's temporal scaling based on a temporal distance, has the predominant vectors are selected in each of, the four directions (Kerdranvrat: column 8, lines 35-45: motion vectors occur in any number of directions therefore the dominant vector could as well), in the claim.

Regarding claim 4, the Kerdranvrat method, now incorporating Lee's temporal scaling based on a temporal distance, has the selection of the reassigned vector is based on the value of the displaced frame difference (Kerdranvrat: column 7, lines 55-67; column 8, lines 1-10), as in the claim.

Regarding claim 7, the Kerdranvrat method, now incorporating Lee's temporal scaling based on a temporal distance, has the selection of the reassigned vector is based on the calculation of the activity in the inter-image difference block (Kerdranvrat: column 7, lines 44-54), as in the claim.

Regarding claim 10, the Kerdranvrat method, now incorporating Lee's temporal scaling based on a temporal distance, has the components of the vectors used during the DFD calculations are the spatially filtered components (Kerdranvrat: column 4, lines 44-67), as the claim.

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Regarding claim 11, the Kerdranvrat method, now incorporating Lee's temporal scaling based on a temporal distance, has wherein the components of the vectors used during the spatial-gradient calculations are the spatially filtered components (Kerdranvrat: column 4, lines 44-67), as in the claim.

Allowable Subject Matter

5. Claims 6, 8, 9, 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The combination of elements claimed in the objected to claims was not found in a prior art search nor considered obvious by the Examiner, because the closest prior art uses a different assignment method with regards to the assignment of the predominant vectors. Accordingly, if claims 5-6, 8-9, and 12-13 are amended as indicated, and rejected claims 1-4, 7, and 10-11 are canceled, the application would be placed in a condition for allowance.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad S. Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao
Primary Examiner
Art Unit 2613

asr
September 5, 2005

ANDY RAO
PRIMARY EXAMINER

